

CHAPTER 4

Management Strategies

The Countywide Transportation System is a system of multiple transportation methods—auto, bus, rail, bicycle, walking—that is managed by multiple agencies. Planning, investment and operation must be done cooperatively among these agencies for the system to function efficiently despite increasing population and employment. Better coordination between transportation and land-use planning is needed to ensure that the county’s growth can be accommodated without harming the environment. Pricing policies are needed to reduce congestion and accelerate progress toward clean air. Regular updates of this plan are necessary to ensure that it continues to reflect the most appropriate mix of transportation improvements—given changing conditions and the availability of funding.

This chapter outlines a strategy of system management, including those funding policies, planning guidelines and pricing policies necessary for its implementation. These include:

- Funding policies designed to ensure enough money is dedicated to the maintenance, operation and operational improvement of existing facilities and services;
- Funding policies designed to ensure efficient operation of those facilities and services that are most essential for the movement of freight;
- Funding policies designed to ensure that major projects work in tandem with land-use planning, and planning guidelines that encourage city, county, regional and state authorities to cooperatively manage traffic in identified corridors or areas;
- Planning guidelines designed to strengthen the connection between transportation and land use and ensure that designated “hubs,” where transportation services connect, and “gateways,” which act as points of entry from other geographic areas, are approached strategically; and

- Pricing alternatives that will preserve our ability to travel freely while protecting the quality of the air we breathe.

Each will be discussed on the pages that follow.

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**PRIORITY FOR THE
MAINTENANCE AND OPERATION
OF EXISTING FACILITIES**

With the aging of our transportation infrastructure—streets, roads and highways—comes a greater need to spend money on maintaining and fixing these facilities. For this reason, the share of the state highway budget committed to maintenance and rehabilitation has increased significantly since the 1970s. Local agencies in Alameda County have been unable to keep pace with that commitment to increased maintenance, and the result is a growing backlog of facilities that require maintenance. Added to the maintenance backlog for streets and roads is the need to maintain other infrastructure such as sidewalk, drainage, street lighting and seismic retrofit of local bridges.

The need to fix and replace transit capital—stations, stops and vehicles—also will continue

to grow as transit service expands. In addition, reliable funding to operate transit services presents a similar problem. Historically, the funding available for transit operations has lagged behind the growth of the cost of those operations, forcing agencies to cut service and wait longer than advisable to perform maintenance. The Metropolitan Transportation Commission (MTC) estimates a combined maintenance and operating shortfall for BART and AC Transit of \$361.4 million. This is the gap between available operating revenues, and those revenues that would be required to operate service and maintain infrastructure and equipment through the year 2026. If no funding is identified, this revenue gap would force the curtailment of existing service, the deferral of necessary maintenance or the deferral of planned investment.

The obligation to pay for backlogged maintenance should not be passed on to the next generation. Simple fairness requires that each generation pay for maintaining the transportation system in working order. It is partly with this philosophy that the Alameda County voters adopted the continuation of a half-cent sales tax to provide additional funds for transit operations.

However, funding for transit capital replacement must come from scarce state and federal transportation resources.

At the same time, fairness to present users requires that the operation of existing service have precedence over expansion of service. This is particularly true for transit. In a forced choice between reducing service and expanding service elsewhere, fairness requires that service expansion wait until more funding is identified.

Finally, jurisdictional equity requires that each area of the county bear the burden of any forced trade-off between the maintenance of existing facilities and the construction of new ones. Each area should bear the responsibility for any history of deferred expenditure.

Consistent with this logic, it is the CMA's goal that the maintenance backlog be eliminated within 25 years—that is, within the present generation. Achieving this goal will require additional revenues or the deferment of some new capital investment.

PRIORITY FOR CRITICAL FREIGHT ROUTES

Alameda County is a global gateway for freight moving by rail and truck. It is also a major warehousing and distribution center for urban goods movement. Because freight transportation makes such an important contribution to the county's economy, it is both necessary and appropriate that the plan give strategic priority to the movement of freight.

To highlight the strategic importance of freight transportation, this plan designates each of the mainline railroads serving the Port of Oakland as Critical Freight Routes. It also designates the following highways as Critical Freight Routes, based on volume of truck traffic that they serve: Interstate 80, I-880, I-238 from I-880 to I-580, I-580 from I-238 east to the county line.

The following additional routes, which carry less truck traffic, are designated as Major Freight Routes: Interstate 680, I-980, Mission Boulevard between I-880 and I-680, Route 92 from I-880 to the San Mateo Bridge, Route 84 from I-880 to the Dumbarton Bridge, and Hegenberger Road from I-880 to the Oakland International Airport.

The CMA intends that those highways designated as Critical Freight Routes be operated in a manner that ensures that freight can be moved with maximum efficiency. To this end, the CMA will approve spending of enough money for operational improvements to ensure that congestion from commute traffic does not negatively affect Critical Freight Routes during midday hours.

STRENGTHENING THE TRANSPORTATION AND LAND- USE CONNECTION

The Alameda County CMA is committed to making transportation decisions that contribute to the health and vitality of the full range of neighborhoods and communities that constitute Alameda County. Transportation is one part of the complex equation that makes up our community vitality, and the CMA Board encourages local decision-makers to consider transportation in the development of community plans.

The challenge for the CMA is to make transportation and development support one another and to identify opportunities for

transportation investment that will improve our quality of life. The CMA is a county transportation agency whose primary function, in collaboration with the four planning areas, is to set countywide transportation priorities. At the same time, the CMA recognizes that land use and community development decisions are the purview of local government. In this spirit, the CMA encourages community plans that:

- Encourage residents to use a range of travel modes—including transit, walking and biking—to access jobs, shopping, recreation and other daily needs.
- Provide that the streets, transit, and pedestrian and bicycle ways are parts of a system of routes that are integrated to work together.
- Provide for development of housing and regional activity centers that are accessible to the regional transit network.
- Provide for a diversity of development and other transit-oriented transportation strategies designed to make it easier to get the basic necessities of living within your own community.

- Provide for the design of streets and other transportation facilities and amenities that are integrated into the overall community design and are as conducive to a sense of community identity and pride as they are to the accommodation of automobiles.

CORRIDOR MANAGEMENT PLANNING

In addition to the above statement on transportation and land use, the CMA supports cooperative planning and coordinated action by local governments, Caltrans, transit agencies, the CMA and MTC. While each jurisdiction can do its individual part to strengthen the ties between transportation and land use, no one jurisdiction or agency acting alone can resolve issues posed by corridor or area-wide traffic.

However, local jurisdictions working together can:

- Reconcile the competing demands that local and long-distance traffic make on the capacity of the freeway system;

- Reconcile continuing population and employment growth with the limited capacity of the freeway system;
- Reconcile the movement of people and goods;
- Prevent pass-through traffic from using local streets;
- Reconcile HOV lanes with plans to meter freeway ramps;
- Pair ramp metering with geometric metering at regional gateways in order to balance the demands of the freeway system; and
- Coordinate the operation of the freeways and parallel arterials and determine when and where to rely on transit as a corridor's primary strategy of traffic management.

These issues are difficult to resolve in the context of countywide planning for the countywide system. The CMA's intent is for the appropriate strategy of traffic management to be determined for each of the county's major corridors/areas on an individual basis. Corridor-by-corridor or area planning is essential because it allows for active local involvement, detailed analysis of operations and choices that are

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tailored to fit the circumstances found in each corridor/area. At the same time, coordinated planning is necessary to ensure that each corridor/area serves its function in the countywide system.

With cooperative planning among all local agencies for all means of transportation, there are significant opportunities to manage corridor/area traffic more effectively:

- Ramp and geometric metering can be combined in an effective strategy for managing freeway traffic, if localities can be assured an effective voice in the development and subsequent adjustment of the metering strategy;
- HOV lanes can be operated most productively, if express bus service can be incorporated in their design and operation;
- Investments in rail transit are most likely to be productive, if they are complementary to local planning for zoning and traffic circulation;
- Efforts to offset the traffic impacts of major development projects are most likely to be effective, if local officials can agree on common mitigation requirements;

- Transportation investment is most likely to create development opportunities where development is desired, if transportation and land-use planning are better coordinated; and
- Rights-of-way—those areas that run alongside freeways and rail lines—can be protected from encroaching development, if transportation and land-use planning are better coordinated.

For all of these reasons, the CMA intends to involve local governments and transit agencies as full partners in the process of corridor/area traffic management. Consistent with the requirements of the Transportation Equity Act for the 21st Century, or TEA-21, the CMA intends that corridor/area planning be continued on a cooperative basis that engages Caltrans, local transit operators, local governments, the CMA, MTC and the Association of Bay Area Governments (ABAG).

The plans establish a traffic management strategy for each of the county's major freeway corridors. It is the CMA's intent that corridor plans include a cooperative program that address short-term improvements for operations, long-

term capital improvements and land-use measures that will complement the operations and capital improvements—such as requirements for developers to play a role in reducing traffic and local zoning that supports transit. Corridor plans completed to date are I-880, San Pablo Avenue/I-80, and I-680. These plans will need to be updated periodically.

In turn, the CMA will give those operational improvements and major capital projects identified in the corridor plans priority to receive funding.

Figure 4.1 outlines the set of principles that provided a basis for developing corridor management planning. The statement of principles and work program gives explicit recognition to the authority of local government in the field of land-use planning.

PLANNING FOR STRATEGIC TREATMENT OF HUBS AND GATEWAYS

Hubs and gateways play a critically important role in the transportation system, but their strategic importance has been neglected in most

plans. Transit hubs are those transfer centers where transit passengers make connections from one type of transportation to another—such as from AC Transit to BART. These connections are called “intermodal.” The CMA intends that convenient connections and transfers should be incorporated into all plans for major transit investment.

Hubs

Intermodal hubs and terminals play an important role in the movement of both passengers and freight. Planning for intermodal freight operation is well advanced, thanks to the private initiative of the maritime industry, railroads, trucking and the Port of Oakland. Funding for intermodal access improvements at the Port of Oakland is included in the investment element of the plan.

Arrangements for passenger transfers between transit systems has been more challenging. From a strategic point of view, the transfer arrangements that are most important are those between BART and:

- Santa Clara County’s heavy- or light-rail system,

- bus services, such as those at the Fruitvale BART Station,
- Capitol Corridor Service,
- the county's emerging HOV/express bus network,
- long-distance rail service, i.e., Altamont Commuter Express, and
- airport connections.

The location of future BART stations and other regional transfer centers are critically important because they will become the predominant transit hubs—where people move from one system to another—of the next generation. Their location and design should be determined in light of this critical role. Signs that clearly identify BART stations and other major transit hubs are another important factor in encouraging transit use, and the CMA supports coordinating signage efforts.

It is the CMA's intent that all plans for major transit investment incorporate convenient connections and transfers. Plans for HOV-lane projects should include permanent park-and-ride facilities and those special design features

needed to enhance express and/or subscription bus service.

Gateways

Gateways serve two functions: They provide access from one geographic area to another, and they constrain—and thus meter—the flow of traffic as it enters metropolitan corridors. By setting policy limits on the number of vehicles that can pass through gateways and by tolerating moderate congestion at these locations, a plan can prevent congestion at other locations where it would be much more disruptive to the operation of the transportation system.

Gateways in Alameda County include the Altamont Pass, Vasco Road, the Caldecott Tunnel, I-580 through Dublin Canyon, I-680 at the Sunol Grade, the Albany Narrows, the Oakland-San Francisco Bay Bridge, and the Dumbarton and Hayward-San Mateo bridge approaches to I-880.

Figure 4.1 — Corridor / Area Management Planning

PRINCIPLES AND GOALS

1. Land-use planning is solely the purview of local governments.
 2. Concurrent planning of transportation and land use is not intended to usurp or preempt local land-use control.
 3. The goal of Corridor/Area Management Planning is to ensure that local governments are involved as full partners in planning for corridor/area traffic management.
 4. Local governments, the CMA, MTC, Caltrans, ABAG, BAAQMD and transit agencies have a shared interest in more effective communication about transportation and land use.
 5. A cooperative planning effort is necessary to ensure effective management of the transportation system and coordination with land use planning.
 6. Cooperative planning of transportation and land-use is intended to ensure that cumulative/regional transportation impacts of local development can be mitigated through local and regional investment and sustained through effective management.
 7. Corridor/Area Management Planning should be reached by consensus. A consensus is considered to include local approval of corridor/area plan even though a local jurisdiction may not subscribe to specific aspects of the plan.
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A THREE-PHASE WORK PROGRAM FOR CORRIDOR/AREA MANAGEMENT PLANNING

Phase One Work Program

1. With the participation of local governments and other public agencies, identify the boundaries of the county's primary transportation corridors and the jurisdictions, which should be involved in the development of a traffic management strategy for each corridor/area.
2. Develop a program that recognizes the limitations of local staff resources.
3. With the participation of local governments and other public agencies, identify those traffic management issues that could be subject to early resolution, some examples might be:
 - The development of a program of short-range operational improvements needed to expedite freight movement
 - The development of a coordinated approach to signal timing on major arterials that cross jurisdictional boundaries
 - The development of guidelines for local jurisdictions to consider the implementation of ramp metering
 - The integration of bus service in plans for HOV lanes, ramp metering and arterial street operation
 - The implementation of design guidelines that support alternative modes of travel

With the participation of local governments and other public agencies, select one or two strategies for implementation in Phase Two.

Decision Point to Move to Phase Two

Phase Two Work Program

1. Develop initial implementation plan based on the recommendations from Phase One.
2. Work with local governments and other public agencies on developing goals and objectives for the Phase Three program.
3. Reach corridor/area consensus on a Phase Three Work Program for transportation/land-use coordination. Phase Three is subject to the limitations of local staff resources.

Decision Point to Move to Phase Three

Phase Three Work Program

1. Based on the consensus reached on the goals and objectives for Phase Three, develop a framework and provide support that allows community within the corridor/area to demonstrate how the community's share of cumulative/regional transportation impacts could be mitigated through cooperative planning and investment.
 2. Support, where appropriate, local plans to enhance the productivity of transit investment through supportive zoning, urban design planning and development approvals.
 3. Incorporate corridor/area management plan into local plans when appropriate.
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Convenient connections and transfers should be incorporated into all plans for major transit investment.

This plan embraces the use of geometric metering as a congestion management strategy. It works in those situations in which it necessary to meter mainline traffic flows at one location in order to shelter other, more critical segments of the freeway system from severe congestion. That means keeping a main arterial road at two lanes with safety improvements instead of widening it to four lanes, which might overwhelm the highway to which the road connects.

Over the long term, the use of electronic toll-collection to implement gateway pricing may provide a more attractive method for achieving the same results. For the short term, to protect busy roads from severe congestion, the CMA supports priority treatment at selected gateways for buses, carpools and commercial vehicles engaged in commercial service as long as people can still travel safely under congested conditions.

TELECOMMUTING AND WORK-AT-HOME ARRANGEMENTS

The share of the Alameda County workforce which works at home increased from 1.7 percent

in 1980 to 3.9 percent in 1990. Much of this increase is attributable to the growth of telecommuting—the use of personal computers, modems and data networks to move data along the so-called information highway. Appropriately, the movement of data on information highways can reduce the need to move vehicles on conventional highways. Updated information will be available from the 2000 census.

The CMA will actively pursue the establishment and implementation of telecommuting programs found to be effective in encouraging more workers to work at home at least part of the time. Telecommuting can play a significant role in managing the transportation system.

PRICING POLICIES AND OTHER CONSERVATION INCENTIVES

Historically, U.S. highway policy was designed to foster rural mobility and rural motorization and to encourage the growth of the automobile and oil industries. The result was government subsidization of rural highway improvement and a pricing policy that kept fuel taxes as low as

possible. In contrast, European nations have long imposed much higher fuel taxes than those in the United States—creating an incentive for fuel conservation and a source of revenue to finance transit operations. The European approach is called “conservation pricing.”

European countries take an aggressive approach to conservation pricing—with most nations charging fuel taxes that exceed \$3 per gallon. An equally aggressive approach would be inappropriate in the United States.

As a first step toward a gentle form of conservation pricing, the CMA endorses gradual increases in the fuel tax—with emphasis on a combination of fuel taxes and fuel sales taxes which have the flexibility to be used for transit improvement and local street and road maintenance. Such increases should be sufficiently gradual to ensure that there are no adverse economic implications for California or the Bay Area.

The CMA also endorses the development of regional or statewide policies which provide:

- tax benefits for workers who share rides and use public or non-motorized transportation, and
- financial incentives to use an alternative form of transportation to work.

Finally, the CMA will prepare the necessary studies to determine if pricing as a means of managing congestion is feasible for one or more corridors within Alameda County. The studies will analyze a range of pricing options along with potential revenue streams.

MANAGEMENT STRATEGIES AND POLICIES

The following management strategies and policies will be implemented:

1. Secure funding sufficient to eliminate the maintenance backlog within 25 years.
2. Focus investment and system management to ensure that congestion does not impair operation of critical freight routes during midday hours.
3. Update the Corridor Management Plans.

4. Improve system performance throughout the coordination and the development of major freight and passenger hubs.
5. Manage gateways to ensure balanced highway operation.
6. Encourage the development of home-based telecommuting programs in the public and private sector.
7. Endorse a gradual increase in the fuel tax and fuel sales tax, which have the flexibility to be used for transit improvement and local street and road maintenance.
8. Endorse the development of local and statewide policies which: 1) provide tax benefits for workers who use alternative modes to commute; and, 2) provide financial incentives for the use of alternative transportation for commuting to work.
9. Endorse further study of pricing mechanisms including an analysis of the economic impacts of congestion pricing. The toll revenues will be reserved to finance the operation of HOV-lane bus service.
10. Develop a countywide Park-and-Ride Facility Plan that includes the location, cost and funding priority for park and ride lots. The plan shall consider opportunities for promoting express transit service where appropriate.